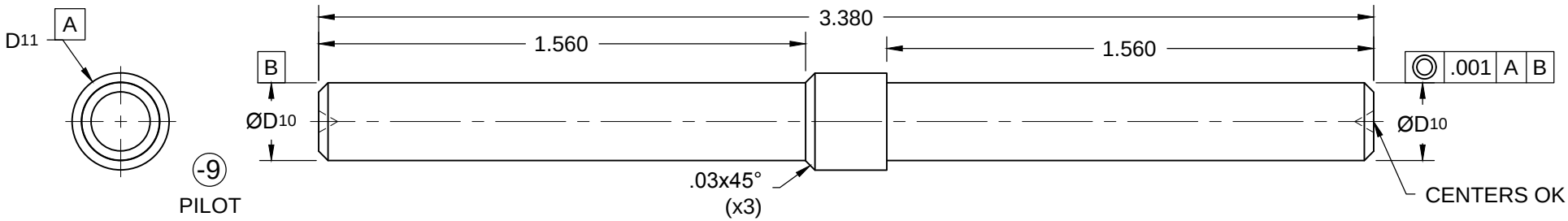



NOTES

1. 125 SURFACE FINISH UNLESS OTHER WISE SPECIFIED.

| PILOT No. | ØD10 -.003 -.001 | ØD11 -.004 -.002 | MATERIAL |
|---|---|---|---|
| -5001 | .1635 | .1635 | 4140 Q&T Ø1/4 x 3-1/2 |
| -5002 | .1885 | .1885 | 4140 Q&T Ø1/4 x 3-1/2 |
| -5003 | .1885 | .2490 | 4140 Q&T Ø1/4 x 3-1/2 |
| -5004 | .1885 | .3110 | 4140 Q&T Ø3/8 x 3-1/2 |
| -5005 | .2490 | .2490 | 4140 Q&T Ø1/4 x 3-1/2 |
| -5006 | .2490 | .3110 | 4140 Q&T Ø3/8 x 3-1/2 |
| -5007 | .2490 | .3740 | 4140 Q&T Ø3/8 x 3-1/2 |
| -5008 | .2490 | .4365 | 4140 Q&T Ø1/2 x 3-1/2 |
| -5009 | .2490 | .4990 | 4140 Q&T Ø1/2 x 3-1/2 |
| -5010 | .3740 | .3740 | 4140 Q&T Ø3/8 x 3-1/2 |
| -5011 | .3740 | .4365 | 4140 Q&T Ø1/2 x 3-1/2 |
| -5012 | .3740 | .4990 | 4140 Q&T Ø1/2 x 3-1/2 |
| -5013 | .3740 | .5615 | 4140 Q&T Ø5/8 x 3-1/2 |
| -5014 | .3740 | .6240 | 4140 Q&T Ø5/8 x 3-1/2 |
| -5015 | .3740 | .8740 | 4140 Q&T Ø7/8 x 3-1/2 |
| -5016 | .2490 | .6240 | 4140 Q&T Ø5/8 x 3-1/2 |
| -5017 | .3740 | .7490 | 4140 Q&T Ø3/4 x 3-1/2 |
| -5018 | .4990 | .4990 | 4140 Q&T Ø1/2 x 3-1/2 |
| -5019 | .4990 | .5615 | 4140 Q&T Ø5/8 x 3-1/2 |
| -5020 | .4990 | .6240 | 4140 Q&T Ø5/8 x 3-1/2 |
| -5021 | .4990 | .7490 | 4140 Q&T Ø3/4 x 3-1/2 |

| PILOT No. | ØD10 -.003 -.001 | ØD11 -.004 -.002 | MATERIAL |
|---|---|---|---|
| -5022 | .4990 | .7864 | 4140 Q&T Ø7/8 x 3-1/2 |
| -5023 | .4990 | .8740 | 4140 Q&T Ø7/8 x 3-1/2 |
| -5024 | .4990 | .9990 | 4140 Q&T Ø1 x 3-1/2 |
| -5025 | .4990 | 1.1801 | 4140 Q&T Ø1-1/4 x 3-1/2 |
| -5026 | .4990 | 1.0615 | 4140 Q&T Ø1-1/8 x 3-1/2 |
| -5027 | .2490 | .8740 | 4140 Q&T Ø7/8 x 3-1/2 |
| -5028 | .4990 | 1.2490 | 4140 Q&T Ø1-1/4 x 3-1/2 |
| -5029 | .4990 | 1.3120 | 4140 Q&T Ø1-3/8 x 3-1/2 |
| -5030 | .4990 | 1.4370 | 4140 Q&T Ø1-1/2 x 3-1/2 |
| -5031 | .4990 | 1.4990 | 4140 Q&T Ø1-1/2 x 3-1/2 |
| -5032 | .4990 | 2.0615 | 4140 Q&T Ø2-1/8 x 3-1/2 |
| -5033 | .4990 | 2.3115 | 4140 Q&T Ø2-3/8 x 3-1/2 |
| -5034 | .4990 | 2.4990 | 4140 Q&T Ø2-1/2 x 3-1/2 |
| -5035 | .4990 | 2.7490 | 4140 Q&T Ø2-3/4 x 3-1/2 |
| -5036 | .4990 | 1.5615 | 4140 Q&T Ø1-5/8 x 3-1/2 |
| -5037 | .4990 | 1.8120 | 4140 Q&T Ø1-7/8 x 3-1/2 |
| -5038 | .2490 | .7490 | 4140 Q&T Ø3/4 x 3-1/2 |
| -5039 | .4990 | 1.7490 | 4140 Q&T Ø1-3/4 x 3-1/2 |
| -5040 | .4990 | 1.8740 | 4140 Q&T Ø1-7/8 x 3-1/2 |
| -5041 | .1240 | .1240 | 4140 Q&T Ø1/4 x 3-1/2 |
| -5042 | .2490 | .4990 | 4140 Q&T Ø1/2 x 3-1/2 |

| PILOT No. | ØD10 -.003 -.001 | ØD11 -.004 -.002 | MATERIAL |
|---|---|---|---|
| -5043 | .2490 | .4830 | 4140 Q&T Ø1/2 x 3-1/2 |
| -5044 | .3740 | .8740 | 4140 Q&T Ø7/8 x 3-1/2 |
| -5045 | .4990 | 1.4240 | 4140 Q&T Ø1-1/2 x 3-1/2 |
| -5046 | .4990 | 1.5940 | 4140 Q&T Ø1-5/8 x 3-1/2 |
| -5047 | .4990 | 2.0990 | 4140 Q&T Ø2-1/8 x 3-1/2 |
| -5048 | .1240 | .2490 | 4140 Q&T Ø1/4 x 3-1/2 |
| -5049 | .1885 | .3115 | 4140 Q&T Ø3/8 x 3-1/2 |
| -5050 | .1885 | .3740 | 4140 Q&T Ø3/8 x 3-1/2 |
| -5051 | .1885 | .4210 | 4140 Q&T Ø1/2 x 3-1/2 |
| -5052 | .1885 | .4310 | 4140 Q&T Ø1/2 x 3-1/2 |
| -5053 | .1885 | .4365 | 4140 Q&T Ø1/2 x 3-1/2 |
| -5054 | .1885 | .4990 | 4140 Q&T Ø1/2 x 3-1/2 |
| -5055 | .2490 | .6840 | 4140 Q&T Ø3/4 x 3-1/2 |
| -5056 | .2490 | .8040 | 4140 Q&T Ø7/8 x 3-1/2 |
| -5057 | .4990 | 1.3730 | 4140 Q&T Ø1-3/8 x 3-1/2 |
| -5058 | .8740 | .8740 | 4140 Q&T Ø7/8 x 3-1/2 |
| -5059 | .2490 | .3140 | 4140 Q&T Ø3/8 x 3-1/2 |
| -5060 | .1885 | .2352 | 4140 Q&T Ø1/4 x 3-1/2 |
| -5061 | .1885 | .1958 | 4140 Q&T Ø1/4 x 3-1/2 |
| -5062 | .4990 | 1.4365 | 4140 Q&T Ø1-1/2 x 3-1/2 |
| -5063 | .6240 | 1.0628 | 4140 Q&T Ø1-1/8 x 3-1/2 |

RED BARN MACHINE

TITLE: 8 POINT STAKING TOOL; RETAINING RING

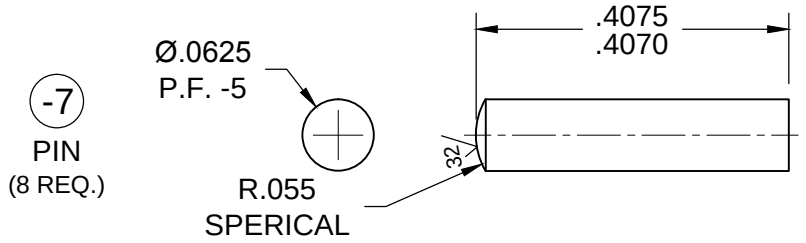
DWG NO.: RBST(TOOL# SEE Pg.1 CHART)-(PILOT# SEE CHART)-9 REV: A

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS
.XXX ± .005
.XX ± .01
.X ± .1
FRACTIONS ± 1/32
ANGLES ±.5°

UNLESS OTHERWISE SPECIFIED
1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING

DRAWN BY: PERRITT
APPROVED
HEAT TREAT
FINISH SPEC: BLACK OXIDE
USED ON BEARING: SEE CHART Pg. 1

SCALE: NTS | DATE: 2-14-08 | SHEET: 6 of 6




NOTES

1. SAME PINS FOR ALL TOOL NUMBERS.
2. BREAK ALL SHARP EDGES.

| ASSY QTY | ASSY QTY | B/O | PART # | UNIT QTY | DESCRIPTION | MAT. | B/O INFORMATION OR SPECIFICATIONS |
|---|---|---|---|---|---|---|---|
| | | W/O | -7 | 8 | PINS | STEEL | Ø.0625 MINUS GAUGE PIN MSC #8900625 |
| | | | | | | | |
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| | ASSY # | | | | | | |

RED BARN MACHINE

TITLE: 8 POINT STAKING TOOL; PIN

DWG NO.: RBST(TOOL# SEE Pg.1 CHART)-(PILOT# SEE Pg.1 CHART)-7 REV: A

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS
.XXX ± .005
.XX ± .01
.X ± .1
FRACTIONS ± 1/32
ANGLES ±.5°

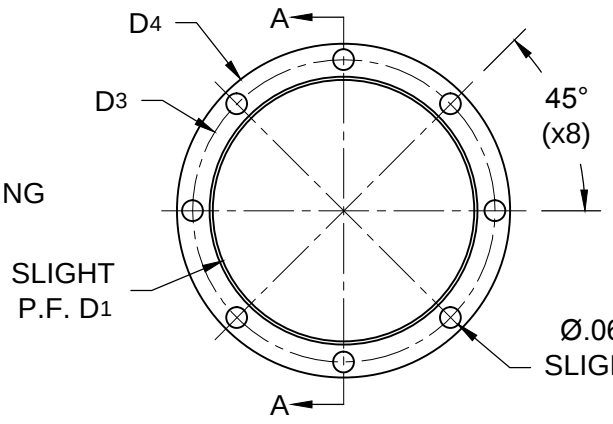
UNLESS OTHERWISE SPECIFIED
1. BREAK ALL SHARP EDGES
.015 x 45° PR .015 R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING

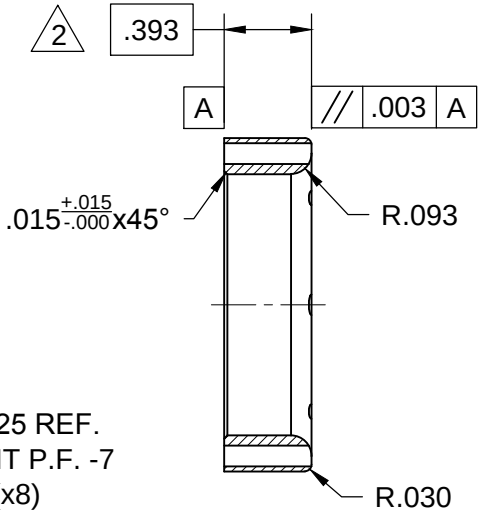
DRAWN BY: PERRITT
APPROVED
HEAT TREAT
FINISH SPEC
USED ON BEARING
SEE CHART Pg. 1

SCALE: NTS
DATE: 2-14-08
SHEET: 5 of 6

-5

RETAINING RING
(2 REQ.)




SECTION A-A

NOTES

1. 125 SURFACE FINISH UNLESS OTHER WISE SPECIFIED.
2. -5 HEIGHT IS .013 TO .014 LESS THAN -7 LENGTH.

| TOOL # | PILOT No. | BEARING OD. | BEARING ID. | ØD1 +.0003 -.0008 | ØD3 +.005 -.005 | ØD4 +.015 -.000 | MATERIAL |
|---|---|---|---|---|---|---|---|
| 1312-055-8-GT | -5015 | 1.3125 | .8750 | 1.2360 | 1.382 | 1.562 | 4140 Q&T Ø1-5/8 x 1/2 |
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RED BARN MACHINE

TITLE: 8 POINT STAKING TOOL; RETAINING RING

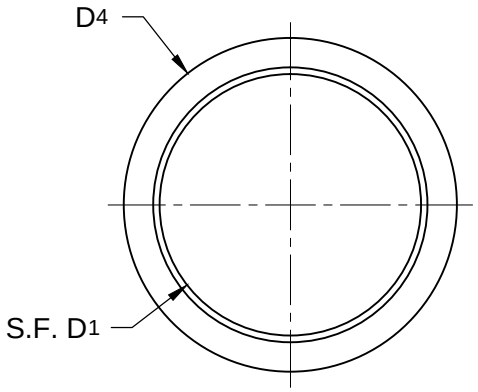
DWG NO.: RBST(TOOL# SEE CHART)-(PILOT# SEE CHART)-5 REV: A

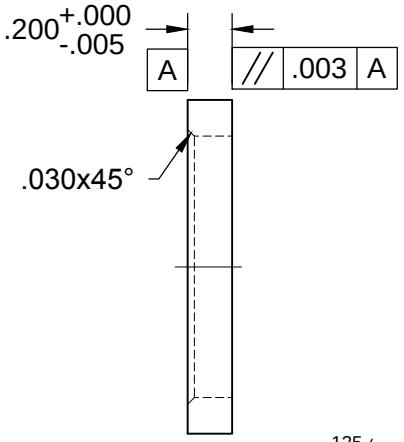
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS
.XXX ± .005
.XX ± .01
.X ± .1
FRACTIONS ± 1/32
ANGLES ±.5°

DRAWN BY: PERRITT
APPROVED
HEAT TREAT
FINISH SPEC: BLACK OXIDE
USED ON BEARING: SEE CHART Pg. 1

UNLESS OTHERWISE SPECIFIED
1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING

SCALE: NTS
DATE: 2-14-08
SHEET: 4 of 6




-3

BACK-UP RING
(2 REQ.)

NOTES

1. 125 SURFACE FINISH UNLESS OTHER WISE SPECIFIED.

| TOOL # | PILOT No. | BEARING OD. | BEARING ID. | ØD1 +.0003 -.0008 | ØD4 +.015 -.000 | MATERIAL |
|---|---|---|---|---|---|---|
| 1312-055-8-GT | -5015 | 1.3125 | .8750 | 1.2360 | 1.562 | O-1 DRILL ROD Ø1-5/8 x 3/8 |
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RED BARN MACHINE

TITLE: 8 POINT STAKING TOOL; BACK-UP RING

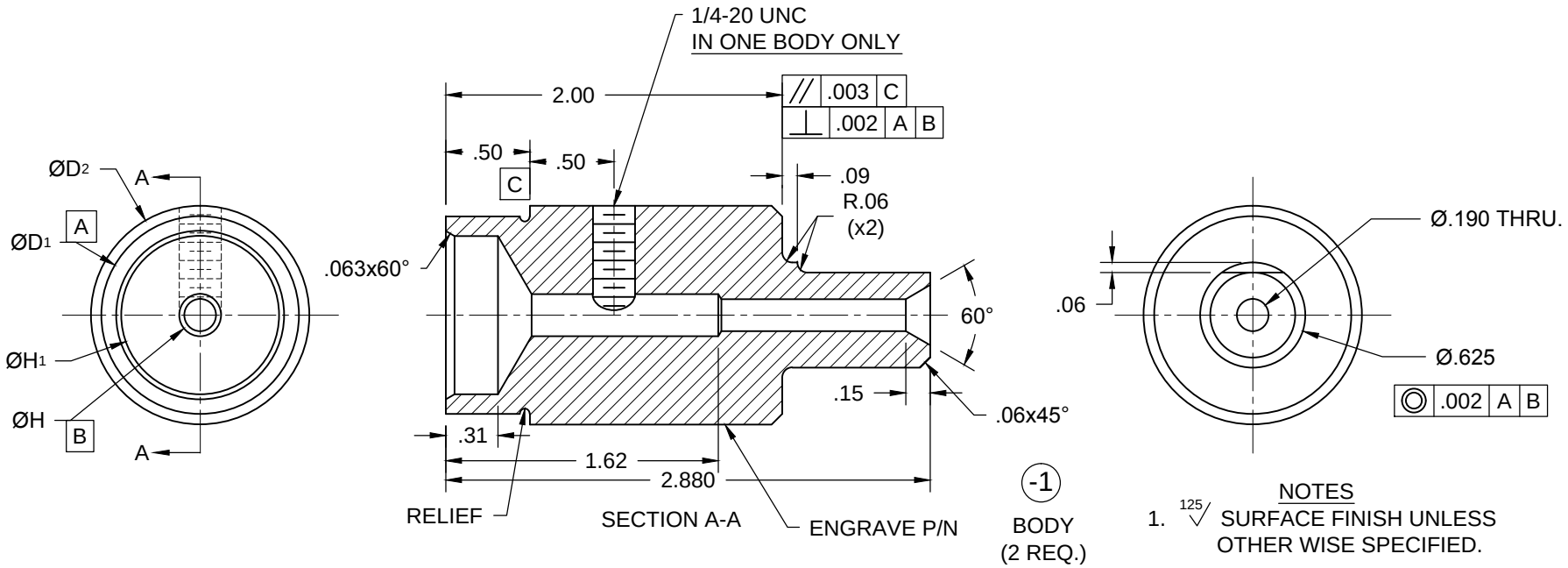
DWG NO.: RBST(TOOL# SEE CHART)-(PILOT# SEE CHART)-3 REV: A

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS
.XXX ± .005
.XX ± .01
.X ± .1
FRACTIONS ± 1/32
ANGLES ±.5°

UNLESS OTHERWISE SPECIFIED
1. BREAK ALL SHARP EDGES
.015 x 45° PR .015 R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING

DRAWN BY: PERRITT
APPROVED
HEAT TREAT: RC. 60-63
FINISH SPEC: BLACK OXIDE
USED ON BEARING
SEE CHART Pg. 1

SCALE: NTS
DATE: 2-14-08
SHEET: 3 of 6




NOTES

1. 125 SURFACE FINISH UNLESS OTHER WISE SPECIFIED.

| TOOL # | PILOT No. | BEARING OD. | BEARING ID. | ØD1 +.0003 -.0008 | ØD2 | ØH +.002 -.000 | ØH1 | MATERIAL |
|---|---|---|---|---|---|---|---|---|
| 1312-055-8-GT | -5015 | 1.3125 | .8750 | 1.2360 | 1.47 | .375 | - | 4140 Q&T Ø1-1/2 x 3 |
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RED BARN MACHINE

TITLE: 8 POINT STAKING TOOL; BODY

DWG NO.: RBST(TOOL# SEE CHART)-(PILOT# SEE CHART)-1 REV: A

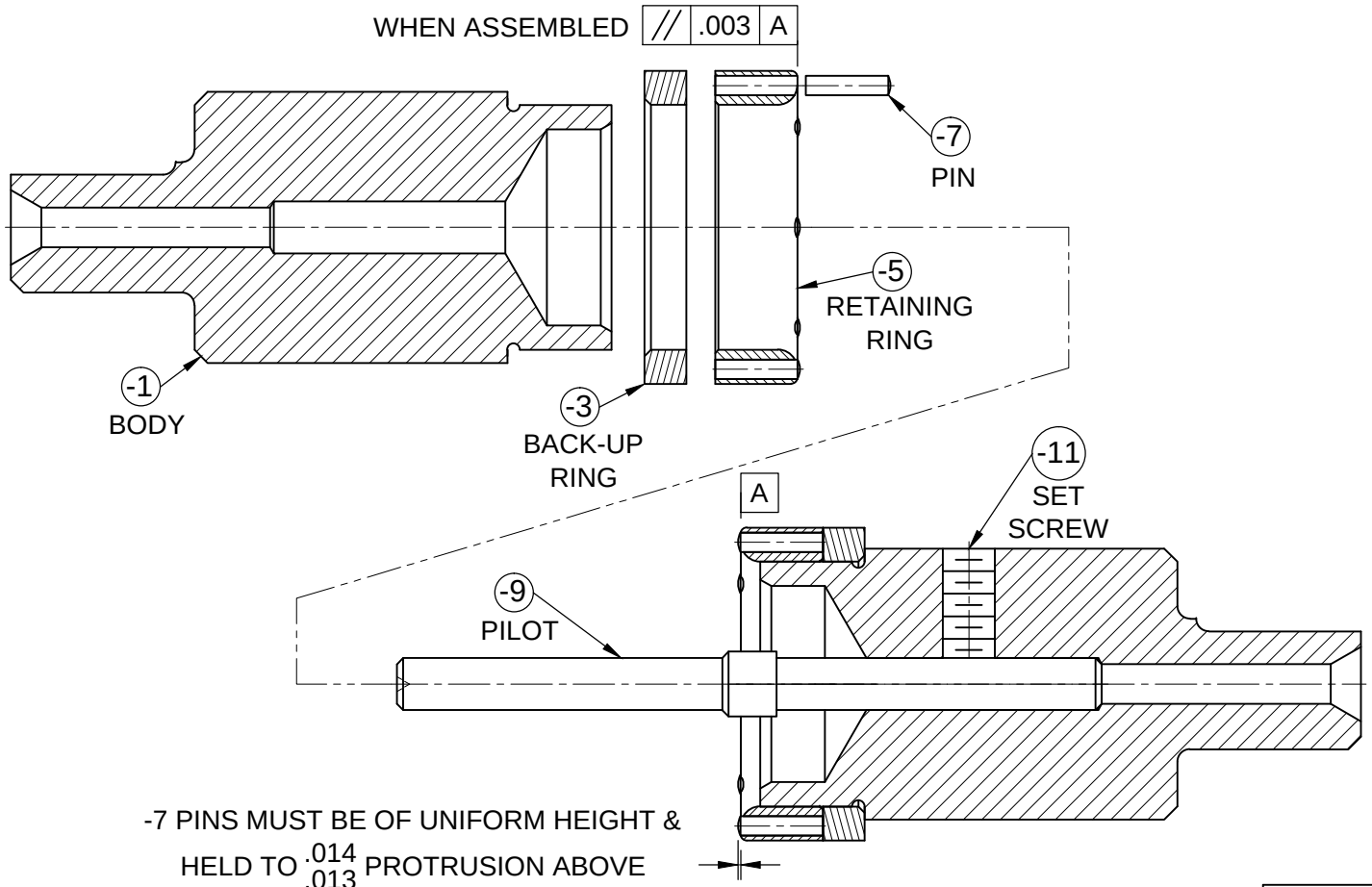
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS
.XXX ± .005
.XX ± .01
.X ± .1
FRACTIONS ± 1/32
ANGLES ±.5°

UNLESS OTHERWISE SPECIFIED
1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING

DRAWN BY: PERRITT
APPROVED
HEAT TREAT
FINISH SPEC: BLACK OXIDE
USED ON BEARING: SEE CHART Pg. 1

SCALE: NTS
DATE: 2-14-08
SHEET: 2 of 6

| REVISIONS | | | | |
|---|---|---|---|---|
| REV | DESCRIPTION | DATE | INITIAL | APPROVED |
| A | CH'D T/N FROM KBST. | 11/19/09 | RJC | |




-7 PINS MUST BE OF UNIFORM HEIGHT &
HELD TO $^{.014}_{.013}$ PROTRUSION ABOVE
-5 RETAINING RING (x8)

## TOOL No. CHART

| BEARING # | TOOL # | PILOT No. |
|---|---|---|
| B540DD | 1312-055-8-GT | -5015 |
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| ASSY QTY | ASSY QTY | B/O | PART # | UNIT QTY | DESCRIPTION | MAT. | B/O INFORMATION OR SPECIFICATIONS | Pg. |
|---|---|---|---|---|---|---|---|---|
| | | | -1 | 2 | BODY | RND. BAR 4140 Q&T | SEE CHART | 2 |
| | | | -3 | 2 | BACK-UP RING | DRILL ROD O-1 | SEE CHART | 3 |
| | | | -5 | 2 | RETAINING RING | RND. BAR 4140 Q&T | SEE CHART | 4 |
| | | W/O | -7 | 16 | PIN | | SEE CHART | 5 |
| | | | -9 | 1 | PILOT | RND. BAR 4140 Q&T | SEE CHART | 6 |
| | | B/O | -11 | 1 | SOCKET HEAD SET SCREW | BLACK | 1/4-20 UNC x 1/4 | N/S |
| | | | | | | | | |
| | | | | | | | | |
| | ASSY # | | | | | | | |

RED BARN MACHINE

TITLE: 8 POINT STAKING TOOL; ASSEMBLY

DWG NO.: RBST(TOOL# SEE CHART)-(PILOT# SEE CHART) REV: A

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS
.XXX ± .005
.XX ± .01
.X ± .1
FRACTIONS ± 1/32
ANGLES ±.5°

UNLESS OTHERWISE SPECIFIED
1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING

DRAWN BY: PERRITT
APPROVED
HEAT TREAT: LISTED PER ITEM
FINISH SPEC: LISTED PER ITEM
USED ON BEARING
SEE CHART Pg. 1

SCALE: NTS | DATE: 2-14-08 | SHEET: 1 of 6

| REVISIONS | | | | |
|---|---|---|---|---|
| REV | DESCRIPTION | DATE | INITIAL | APPROVED |
| – | -- | - | - | - |

NOT APPROVED FOR PRODUCTION

| ASSY QTY | ASSY QTY | B/O | PART # | UNIT QTY | DESCRIPTION | MAT. | B/O INFORMATION OR SPECIFICATIONS | Pg. |
|---|---|---|---|---|---|---|---|---|
| | | | -1 | 1 | RND | 6061 | Ø8-1/4 x 3-7/8 | 2 |
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| | ASSY # | | | | | | | |

RED BARN MACHINE

TITLE: 8 POINT STAKING TOOL

DWG NO. -- REV

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS
.XXX ± .005
.XX ± .01
.X ± .1
FRACTIONS ± 1/32
ANGLES ±.5°

UNLESS OTHERWISE SPECIFIED
1. BREAK ALL SHARP EDGES
.015 x 45° PR .015 R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING

DRAWN BY: PERRITT
APPROVED
HEAT TREAT
FINISH SPEC
USED ON MODEL

SCALE NTS | DATE 8-15-07 | SHEET 1 of 1

| REVISIONS | | | | |
|---|---|---|---|---|
| REV | DESCRIPTION | DATE | INITIAL | APPROVED |
| – | -- | – | – | – |



| ASSY QTY | ASSY QTY | B/O | PART # | QTY | DESCRIPTION | MAT. | B/O INFORMATION OR SPECIFICATIONS | Pg. |
|---|---|---|---|---|---|---|---|---|
| | | | -1 | 1 | RND | 6061 | Ø8-1/4 x 3-7/8 | 2 |
| | ASSY # | | | | | | | |

RED BARN MACHINE

TITLE: – –

DWG NO.: – – REV:

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS
.XXX ± .005
.XX ± .01
.X ± .1
FRACTIONS ± 1/32
ANGLES ±.5°

UNLESS OTHERWISE SPECIFIED
1. BREAK ALL SHARP EDGES
.015 x 45° PR .015 R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING

DRAWN BY: PERRITT
APPROVED
HEAT TREAT
FINISH SPEC
USED ON MODEL

SCALE: NTS DATE: 8-15-07 SHEET: 1 of 1

| REVISIONS | | | | |
|---|---|---|---|---|
| REV | DESCRIPTION | DATE | INITIAL | APPROVED |
| – | -- | – | – | – |

| BEARING # | TOOL # | PILOT No. |
|---|---|---|
| LSS9, BHDN-9003 | 1093-8-GT | -5013 |
| | | |
| K8A, KF8A, KPA8 | 1125-8-GT | -5012 |
| | | |
| RBC-8 | 1187-8-GT | -5012 |
| AT-9 | | -5013 |
| BSR100000, HSB10, LSS10 | | -5014 |
| B5539ZZ | | -5017 |
| | | |
| AF4, A4, AB4 | 1250-8-GT | -5005 |
| K5,KF5,KS5,KR5,D5,DS5,DF5,KP5 | | -5006 |
| AT-10 | | -5016 |
| | | |
| AT75DA | 1312-8-GT | -5011 |
| RBC-10 | | -5014 |
| B-540, TN-514 | | -5015 |
| | | |
| K10A, KF10A, KP10A | 1375-8-GT | -5014 |
| AT12-1, BSR12000-G, AT12 | | -5017 |



| ASSY QTY | ASSY QTY | B/O | PART # | UNIT QTY | DESCRIPTION | MAT. | B/O INFORMATION OR SPECIFICATIONS | Pg. |
|---|---|---|---|---|---|---|---|---|
| | | | -1 | 1 | RND | 6061 | Ø8-1/4 x 3-7/8 | 2 |
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| | | | | | | | | |
| | | | | | | | | |
| | ASSY # | | | | | | | |

RED BARN MACHINE

TITLE: 8 POINT STAKING TOOL; ASSEMBLY

DWG NO.: KBST(TOOL# SEE CHART)-(PILOT# SEE CHART) REV:

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS
.XXX ± .005
.XX ± .01
.X ± .1
FRACTIONS ± 1/32
ANGLES ±.5°

UNLESS OTHERWISE SPECIFIED
1. BREAK ALL SHARP EDGES
.015 x 45° PR .015 R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING

DRAWN BY: PERRITT
APPROVED
HEAT TREAT
FINISH SPEC
USED ON BEARING
SEE CHART Pg. 1

SCALE: NTS
DATE: 2-6-08
SHEET: 1 of 6